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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/655,842	09/06/2000	Kiyoshi Ueyoko	0229-0608P	9804

7590

02/06/2002

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EXAMINER

FISCHER, JUSTIN R

ART UNIT

PAPER NUMBER

1733

7

DATE MAILED: 02/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-7

Office Action Summary

Application No.

09/655,842

Applicant(s)

UEYOKO ET AL.

Examiner

Justin R Fischer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of a pneumatic tire having a pair of bead portions, a carcass ply of cords, a rubber bead apex, and a fiber reinforced rubber spacer formed of a single rubber strip in Paper No. 6 is acknowledged. The traversal is on the ground(s) that a serious burden has not been placed on the examiner. This is not found persuasive because the claimed inventions, as noted in Paper No. 5, define patentably distinct inventions, each having a unique and separate means for establishing patentability. In this instance, the number of rubber strips used and their orientation represents a significant aspect of the claimed invention, and as such, the species requirement is directed toward multiple, patentably distinct inventions.

The requirement is still deemed proper and is therefore made FINAL.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on September 6, 1999. It is noted, however, that applicant has not filed a certified copy of the Japanese application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iuchi (US 4,319,622) in view of Kuroda (US 4,088,169). As best depicted in Figure 2, Iuchi describes a prior art tire construction having, in addition to the general tire components, a fiber reinforced rubber spacer (rubber coated fabric 10) interposed between the bead core and the carcass ply. Also, said fiber reinforced rubber spacer is made of a single strip that is wound once around the bead core to form a slack portion that is radially outside the bead core. Additionally, though Iuchi appears to depict a bead portion in which the distance L1, defined as extending between the outermost portion of said fiber reinforced rubber spacer and the bead core, meets the broad limitation defined by applicant, the reference does not expressly mention the relevant distance. In any event, the broad range defined by applicant suggests a conventional design parameter that is used extensively in similar bead portion structures. For example, Kuroda teaches a similar bead portion in which a rubberized fabric is wound around the bead core, such that a rubber layer is disposed between said fabric and said bead core. Furthermore, Kuroda suggests that the rubber layer, which defines the distance L1 in both Iuchi and Kuroda, can have a thickness that ranges between 0.7 and 6 times the diameter of the bead core reinforcing element (Abstract). Thus, it is clearly evident that almost all the embodiments detailed by Kuroda would have a distance L1 that was greater than 0.05 times the bead core height. Therefore, applicant defines a broad and conventional range that, in addition to being depicted by Iuchi, is clearly outlined by Kuroda. As such, it would have been obvious to one of ordinary skill

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in the art at the time of the invention to have a distance L1 between 0.05 and 1.0 times the bead core height, as suggested by Kuroda, in the general tire structure of Iuchi, for the reasons set forth above.

3. Claims 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iuchi and Kuroda as applied to claim 2 above, and further in view of Lejune (US 3,949,800). Iuchi (Figure 2) depicts the claimed fiber reinforced rubber spacer in which a rubber layer is disposed between the wound fabric and the bead core. However, Iuchi is completely silent with respect to the hardness of said rubber layer with respect to the bead apex rubber. However, a variety of rubber layers, including those with a lower, the same or a higher hardness value in comparison to the apex, have been used between the wound fabric and the bead core. For example, Kuroda states that the rubber layer should have a hardness that is **at least equal** to the lower hardness of the coating rubber of either one of a rubberized metal cord layer and the rubberized fabric (Column 4, Lines 12-16), thus suggesting several embodiments in which the rubber layer hardness is the same, lower, or higher than the apex hardness. Also, Lejune describes a similar rubber layer in which the apex rubber has a lower hardness than the rubber layer or stuffing rubber (Column 3, Lines 63-68). Thus, it is clearly evident that many types of rubber have been used in the relevant rubber layer, all of which are claimed by applicant. Furthermore, applicant's claim of all three possible hardness relationships necessarily indicates that there is no criticality in the specific selection of any one rubber type. Thus, since all of the claimed rubber types are known in the art and applicant has not provided any criticality for their selection, it would have been obvious to one of

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ordinary skill in the art at the time of the invention to form the rubber layer of a rubber having a hardness less than, equal to, or greater than the bead apex, as set forth above.

Allowable Subject Matter

4. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. There was no reference in the prior art search that suggested the manufacture of a pneumatic tire in which a single rubber strip is initially wound around the bead core, in accordance to the limitations of the claimed invention, and subsequently shifted to extend radially outward along the carcass ply main portion, such that the radially outer end of said rubber strip is located at a position that is between 0.05 and 1.0 times the bead core height.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(703) 605-4397**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Justin Fischer

February 4, 2002



Michael W. Ball
Supervisory Patent Examiner
Technology Center (700)